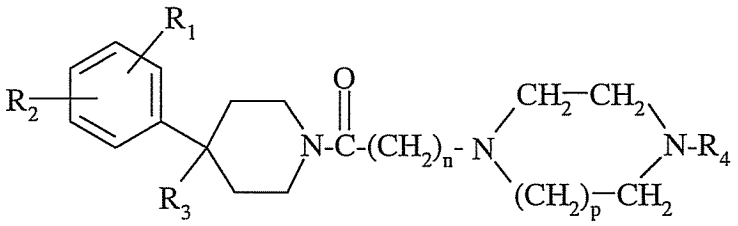
Amendment Pursuant to 37 C.F.R. § 1.121

IN THE CLAIMS:

The claims set forth below with amendments as indicated will replace all prior versions and listing of claims in the application.

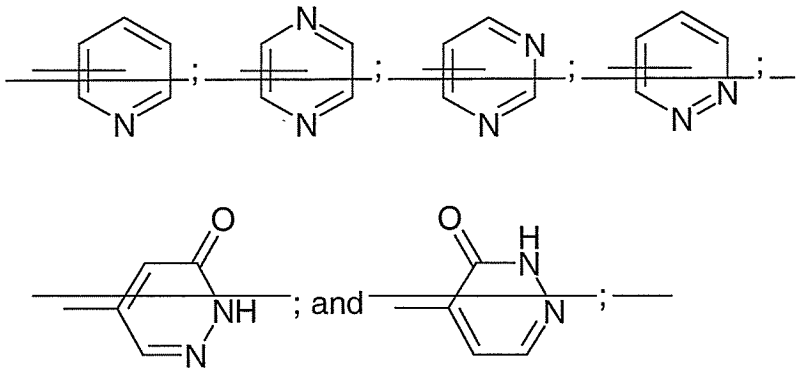
1. (Currently amended): A compound of formula (I):



(I)

in which:

- n is 1 or 2;
- p is 1 or 2;
- R_1 represents a halogen atom; a trifluoromethyl radical; a (C_1-C_4)alkyl; a (C_1-C_4)alkoxy; or a trifluoromethoxy radical;
- R_2 represents a hydrogen atom or a halogen atom;
- R_3 represents a hydrogen atom; a group $-OR_5$; a group $-CH_2OR_5$; a group $-NR_6R_7$; a group $-NR_8COR_9$; a group $-NR_8CONR_{10}R_{11}$; a group $-CH_2NR_{12}R_{13}$; a group $-CH_2NR_8CONR_{14}R_{15}$; a (C_1-C_4)alkoxycarbonyl; or a group $-CONR_{16}R_{17}$;
- or else R_3 constitutes a double bond between the carbon atom to which it is attached and the adjacent carbon atom of the piperidine ring;
- R_4 represents **a pyrazinyl** ~~**an aromatic group selected from:**~~



- ~~**the said aromatic groups**~~ **which is** being unsubstituted or being mono- or disubstituted by a substituent selected independently from a halogen atom; a $(C_1\text{-}C_4)$alkyl; a $(C_1\text{-}C_4)$alkoxy; and a trifluoromethyl radical;
- R_5 represents a hydrogen atom; a $(C_1\text{-}C_4)$alkyl; or a $(C_1\text{-}C_4)$alkylcarbonyl;
- R_6 and R_7 represent each independently a hydrogen atom or a $(C_1\text{-}C_4)$alkyl;
- R_8 represents a hydrogen atom or a $(C_1\text{-}C_4)$alkyl;
- R_9 represents a $(C_1\text{-}C_4)$alkyl or a group $-(CH_2)_m\text{-}NR_6R_7$;
- m is 1, 2 or 3;
- R_{10} and R_{11} represent each independently a hydrogen atom or a $(C_1\text{-}C_4)$alkyl;
- R_{12} represents a hydrogen atom or a $(C_1\text{-}C_5)$alkyl;
- R_{13} represents a hydrogen atom, a $(C_1\text{-}C_5)$ alkyl, a group $-(CH_2)_q\text{-}OH$ or a group $-(CH_2)_q\text{-}S\text{-}CH_3$;
- or else R_{12} and R_{13}, together with the nitrogen atom to which they are attached, constitute a heterocycle selected from aziridine, azetidine, pyrrolidine, piperidine and morpholine;
- q is 2 or 3;
- R_{14} and R_{15} represent each independently a hydrogen atom or a $(C_1\text{-}C_4)$alkyl;
- R_{16} represents a hydrogen atom or a $(C_1\text{-}C_4)$alkyl;
- R_{17} represents a hydrogen atom, a $(C_1\text{-}C_5)$ alkyl, or a group $-(CH_2)_q\text{-}NR_6R_7$;
- or else R_{16} and R_{17}, together with the nitrogen atom to which they are attached, constitute a heterocycle selected from azetidine, pyrrolidine,

piperidine, morpholine and piperazine which is unsubstituted or substituted in position 4 by a (C_1-C_4)alkyl;
or an acid addition salt ~~**hydrate or solvate**~~ thereof.

2. (Previously presented): A compound according to Claim 1 wherein:
- R_1 is in position 2, 3 or 4 of the phenyl and represents a trifluoromethyl radical, a chlorine atom, a methyl, a methoxy or a trifluoromethoxy radical and R_2 represents a hydrogen atom; or else R_1 is in position 3 of the phenyl and represents a trifluoromethyl radical and R_2 is in position 4 of the phenyl and represents a chlorine atom.

3. (Previously presented): A compound according to Claim 1 wherein:
- R_3 represents a hydrogen atom, a hydroxyl, a methoxy, an (acetyloxy)methyl, a hydroxymethyl, a dimethylamino, an acetylamino, an aminomethyl, a (methylamino)methyl, a (dimethylamino)methyl, a (diethylamino)methyl, an (isopropylamino)methyl, an (N-methylisopropylamino)methyl, an (isobutylamino)methyl; an (N-methylisobutylamino)methyl, an (isopentylamino)methyl, an (N-methylisopentylamino)methyl, an aminocarbonyl, or an azetidin-1-ylcarbonyl; or else R_3 constitutes a double bond between the carbon atom to which it is attached and the adjacent carbon atom of the piperidine ring.

4. (Currently amended): A compound according to Claim 1 wherein:
- R_4 represents ~~**a 2-pyridyl, a 6-methyl-2-pyridyl, a 3-(trifluoromethyl)-2-pyridyl, a 5-(trifluoromethyl)-2-pyridyl, a 3-chloro-5-(trifluoromethyl)-2-pyridyl, a 3-pyridyl, a 4-pyridyl, a 3,5-dichloro-4-pyridyl,**~~ a 2-pyrazinyl, a 5-chloro-2-pyrazinyl~~**,**~~ **or** a 6-chloro-2-pyrazinyl~~**, a 2-pyrimidinyl, a 4-(trifluoromethyl)-2-pyrimidinyl, a 6-chloro-2-pyrimidinyl, a 4-pyrimidinyl, a 6-chloro-4-pyrimidinyl, a 5-pyrimidinyl, a 3-pyridazinyl, a 6-chloro-3-pyridazinyl, a 4-pyridazinyl, a 3(2*H*)-pyridazinone-5-yl or a 3(2*H*)-pyridazinone-4-yl**~~.

5. (Currently amended): A compound according to Claim 1 wherein:
- n is 1 or 2;

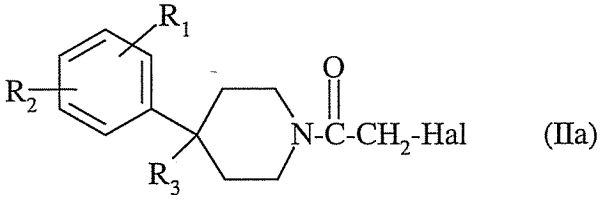
- p is 1 or 2;
- R_1 is in position 2, 3 or 4 of the phenyl and represents a trifluoromethyl radical, a chlorine atom, a methyl, a methoxy or a trifluoromethoxy radical and R_2 represents a hydrogen atom; or else R_1 is in position 3 of the phenyl and represents a trifluoromethyl radical and R_2 is in position 4 of the phenyl and represents a chlorine atom;
- R_3 represents a hydrogen atom, a hydroxyl, a methoxy, an (acetyloxy)methyl, a hydroxymethyl, a dimethylamino, an acetylamino, an aminomethyl, a (methylamino)methyl, a (dimethylamino)methyl, a (diethylamino)methyl, an (isopropylamino)methyl, an (N-methylisopropylamino)methyl; an (isobutylamino)methyl; an (N-methylisobutylamino)methyl, an (isopentylamino)methyl, an (N-methylisopentylamino)methyl, an aminocarbonyl, or an azetidin-1-ylcarbonyl; or else R_3 constitutes a double bond between the carbon atom to which it is attached and the adjacent carbon atom of the piperidine ring;
- R_4 represents ~~**a 2-pyridyl, a 6-methyl-2-pyridyl, a 3-(trifluoromethyl)-2-pyridyl, a 5-(trifluoromethyl)-2-pyridyl, a 3-chloro-5-(trifluoromethyl)-2-pyridyl, a 3-pyridyl, a 4-pyridyl, a 3,5-dichloro-4-pyridyl,**~~ a 2-pyrazinyl, a 5-chloro-2-pyrazinyl~~,~~ **or** a 6-chloro-2-pyrazinyl~~, a 2-pyrimidinyl, a 4-(trifluoromethyl)-2-pyrimidinyl, a 6-chloro-2-pyrimidinyl, a 4-pyrimidinyl, a 6-chloro-4-pyrimidinyl, a 5-pyrimidinyl, a 3-pyridazinyl, a 6-chloro-3-pyridazinyl, a 4-pyridazinyl, a 3(2*H*)-pyridazinone-5-yl, or a 3(2*H*)-pyridazinone-4-yl~~.

6. (Currently amended): A compound according to Claim 1 wherein:
- n is 1;
- p is 1;
- R_1 is in position 2, 3 or 4 of the phenyl and represents a trifluoromethyl radical, a chlorine atom, a methoxy or a trifluoromethoxy radical and R_2 represents a hydrogen atom; or else R_1 is in position 3 of the phenyl and represents a trifluoromethyl radical and R_2 is in position 4 of the phenyl and represents a chlorine atom;
- R_3 represents a hydroxyl, a dimethylamino, an aminomethyl, a (methylamino)methyl, a (dimethylamino)methyl, a (diethylamino)methyl, an

(isopropylamino)methyl, an (isobutylamino)methyl, an (isopentylamino)methyl, an (N-methylisopentylamino)methyl or an aminocarbonyl; or else R_3 constitutes a double bond between the carbon atom to which it is attached and the adjacent carbon atom of the piperidine ring; and

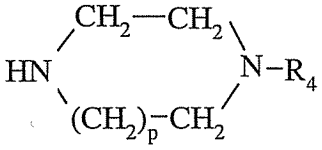
- R_4 represents a 2-pyrazinyl~~, a 4-pyrimidinyl, a 3(2*H*)-pyridazinone-5-yl or a 5-(trifluoromethyl)-2-pyridyl~~.

7. (Previously presented): A process for preparing a compound according to Claim 1 in which n = 1
wherein a compound of formula (IIA)



(IIa)

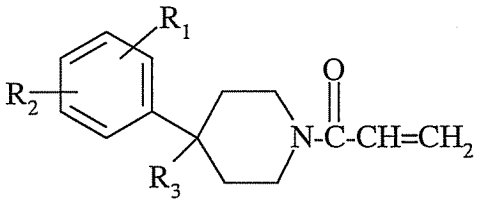
in which R_1, R_2 and R_3 are as defined in Claim 1 and Hal represents a halogen atom, with the proviso that when R_3 contains a hydroxyl or amine function these functions may be protected, is reacted with a compound of formula (III)



(III)

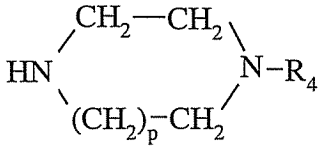
in which p and R_4 are as defined in Claim 1;
and deprotection of the hydroxyl or amine functions present in R_3 where appropriate.

8. (Previously presented): A process for preparing a compound according to Claim 1 in which n = 2
wherein a compound of formula IIb



(IIb)

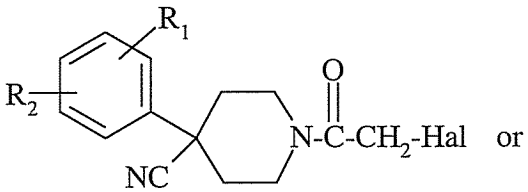
in which R_1, R_2 and R_3 are as defined in Claim 1, with the proviso that when R_3 contains a hydroxyl or amine function these functions may be protected, is reacted with a compound of formula (III)



(III)

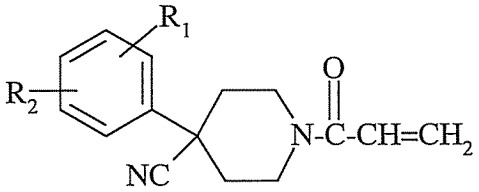
in which p and R_4 are as defined in Claim 1;
and deprotection of the hydroxyl or amine functions present in R_3 where appropriate.

9. (Previously presented): A process for preparing a compound according to Claim 1 in which R_3 represents a group $-CH_2NR_{12}R_{13}$ in which R_{12} and R_{13} each represent hydrogen
wherein a compound of formula (IIc) or (IId)



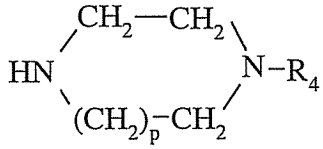
(IIc)

or



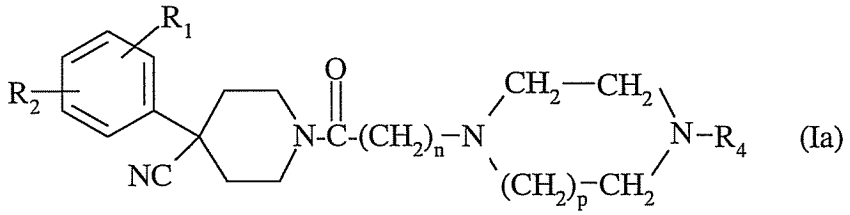
(IId)

in which R_1 and R_2 are as defined in Claim 1 and Hal represents a halogen atom, is reacted with a compound of formula (III)



(III)

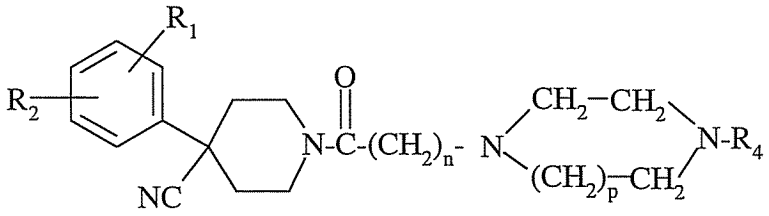
in which p and R_4 are as defined in Claim 1 to give a compound of formula (Ia)



(Ia)

and the cyano group of the compound of formula (Ia) is reduced.

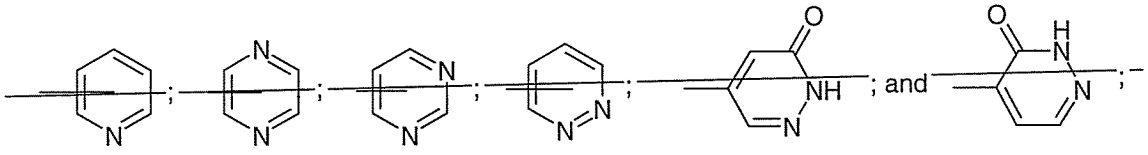
10. (Currently amended): A compound of formula (Ia)



(Ia)

in which:

- n is 1 or 2;
- p is 1 or 2;
- R_1 represents a halogen atom; a trifluoromethyl radical; a (C_1-C_4)alkyl; a (C_1-C_4)alkoxy; or a trifluoromethoxy radical;
- R_2 represents a hydrogen atom or a halogen atom;
- R_4 represents **a pyrazinyl** ~~**an aromatic group selected from:**~~



~~**the said aromatic groups**~~ **which is** being unsubstituted or mono- or disubstituted by a substituent selected independently from a halogen atom, a (C_1-C_4)alkyl, a (C_1-C_4)alkoxy, a trifluoromethoxy radical;

or an acid addition salt ~~hydrate or solvate~~ thereof.

Claims 11-13 (Cancelled)

14. (Currently amended) A compound according to Claim 1 selected from the group consisting of:

1-[4-(aminomethyl)-4-[3-(trifluoromethyl)phenyl]-1-piperidyl]-2-[4-(2-pyrazinyl)-1-piperazinyl]-1-ethanone;

~~5-[4-[2-[4-hydroxy-4-[3-(trifluoromethyl)phenyl]-1-piperidyl]-2-oxoethyl]-1-piperazinyl]-3(2*H*)-pyridazinone;~~

1-[4-hydroxy-4-[2-(trifluoromethyl)phenyl]-1-piperidyl]-2-[4-(2-pyrazinyl)-1-piperazinyl]-1-ethanone;

~~2-[4-(4-pyrimidinyl)-1-piperazinyl]-1-[4-[3-(trifluoromethyl)phenyl]-3,6-dihydro-1(2*H*)-pyridyl]-1-ethanone;~~

2-[4-(2-pyrazinyl)-1-piperazinyl]-1-[4-[2-(trifluoromethyl)phenyl]-3,6-dihydro-1(2*H*)-pyridyl]-1-ethanone;

1-[2-[4-(2-pyrazinyl)-1-piperazinyl]acetyl]-4-[3-(trifluoromethyl)phenyl]-4-piperidinecarboxamide;

1-[4-(dimethylamino)-4-[3-(trifluoromethyl)phenyl]-1-piperidyl]-2-[4-(2-pyrazinyl)-1-piperazinyl]-1-ethanone;

1-[4-hydroxy-4-[3-(trifluoromethyl)phenyl]-1-piperidyl]-2-[4-(2-pyrazinyl)-1-piperazinyl]-1-ethanone;

1-[4-[(dimethylamino)methyl]-4-[3-(trifluoromethyl)phenyl]-1-piperidyl]-2-[4-(2-pyrazinyl)-1-piperazinyl]-1-ethanone;

1-[4-(4-chlorophenyl)-3,6-dihydro-1(2*H*)-pyridyl]-2-[4-(2-pyrazinyl)-1-piperazinyl]-1-ethanone;

1-[4-hydroxy-4-(3-methoxyphenyl)-1-piperidyl]-2-[4-(2-pyrazinyl)-1-piperazinyl]-1-ethanone;

1-[4-[4-chloro-3-(trifluoromethyl)phenyl]-3,6-dihydro-1(2*H*)-pyridyl]-2-[4-(2-pyrazinyl)-1-piperazinyl]-1-ethanone;

~~1-[4-[4-chloro-3-(trifluoromethyl)phenyl]-3,6-dihydro-1(2*H*)-pyridyl]-2-[4-[5-(trifluoromethyl)-2-pyridyl]1-piperazinyl]-1-ethanone;~~

1-[4-[(methylamino)methyl]-4-[3-(trifluoromethyl)phenyl]-1-piperidyl]-2-[4-(2-pyrazinyl)-1-piperazinyl]-1-ethanone;

1-[4-[(diethylamino)methyl]-4-[3-(trifluoromethyl)phenyl]-1-piperidyl]-2-[4-(2-pyrazinyl)-1-piperazinyl]-1-ethanone;
1-[4-[(isopropylamino)methyl]-4-[3-(trifluoromethyl)phenyl]-1-piperidyl]-2-[4-(2-pyrazinyl)-1-piperazinyl]-1-ethanone;
1-[4-[(isobutylamino)methyl]-4-[3-(trifluoromethyl)phenyl]-1-piperidyl]-2-[4-(2-pyrazinyl)-1-piperazinyl]-1-ethanone;
1-[4-[(isopentylamino)methyl]-4-[3-(trifluoromethyl)phenyl]-1-piperidyl]-2-[4-(2-pyrazinyl)-1-piperazinyl]-1-ethanone;
1-[4-[(N-methylisopentylamino)methyl]-4-[3-(trifluoromethyl)phenyl]-1-piperidyl]-2-[4-(2-pyrazinyl)-1-piperazinyl]-1-ethanone; and
1-[4-hydroxy-4-[3-(trifluoromethoxy)phenyl]-1-piperidyl]-2-[4-(2-pyrazinyl)-1-piperazinyl]-1-ethanone;
or an acid addition salt~~, hydrate or solvate~~ thereof.

15. (Original) A pharmaceutical composition comprising a compound according to Claim 1 together with a pharmaceutically acceptable excipient.

16. (Original) A pharmaceutical composition comprising a compound according to Claim 2 together with a pharmaceutically acceptable excipient.

17. (Original) A pharmaceutical composition comprising a compound according to Claim 3 together with a pharmaceutically acceptable excipient.

18. (Original) A pharmaceutical composition comprising a compound according to Claim 4 together with a pharmaceutically acceptable excipient.

19. (Original) A pharmaceutical composition comprising a compound according to Claim 5 together with a pharmaceutically acceptable excipient.

20. (Original) A pharmaceutical composition comprising a compound according to Claim 6 together with a pharmaceutically acceptable excipient.

21. (Original) A pharmaceutical composition comprising a compound according to Claim 14 together with a pharmaceutically acceptable excipient.

22. (Currently amended) A method for the treatment of central or peripheral neurodegenerative diseases; amyotrophic lateral sclerosis, multiple sclerosis; cardiovascular conditions; peripheral neuropathies; damage to the optic nerve and to the retina; spinal cord trauma and cranial trauma; atherosclerosis; stenoses; cicatrization; alopecia; cancers; tumours; metastases; leukaemias; chronic neuropathic and inflammatory pain; autoimmune diseases; **or** bone fractures~~; or bone diseases~~, which comprises administering to a patient in need of such treatment a therapeutically effective amount of a compound according to Claim 1.

23. (Currently amended) A method for the treatment of central or peripheral neurodegenerative diseases; amyotrophic lateral sclerosis, multiple sclerosis; cardiovascular conditions; peripheral neuropathies; damage to the optic nerve and to the retina; spinal cord trauma and cranial trauma; atherosclerosis; stenoses; cicatrization; alopecia; cancers; tumours; metastases; leukaemias; chronic neuropathic and inflammatory pain; autoimmune diseases; **or** bone fractures~~; or bone diseases~~, which comprises administering to a patient in need of such treatment a therapeutically effective amount of a compound according to Claim 2.

24. (Currently amended) A method for the treatment of central or peripheral neurodegenerative diseases; amyotrophic lateral sclerosis, multiple sclerosis; cardiovascular conditions; peripheral neuropathies; damage to the optic nerve and to the retina; spinal cord trauma and cranial trauma; atherosclerosis; stenoses; cicatrization; alopecia; cancers; tumours; metastases; leukaemias; chronic neuropathic and inflammatory pain; autoimmune diseases; **or** bone fractures~~; or bone diseases~~, which comprises administering to a patient in need of such treatment a therapeutically effective amount of a compound according to Claim 3.

25. (Currently amended) A method for the treatment of central or peripheral neurodegenerative diseases; amyotrophic lateral sclerosis, multiple sclerosis; cardiovascular conditions; peripheral neuropathies; damage to the optic nerve and to the retina; spinal cord trauma and cranial trauma; atherosclerosis; stenoses; cicatrization; alopecia; cancers; tumours; metastases; leukaemias; chronic neuropathic and inflammatory pain; autoimmune diseases; **or** bone fractures~~; or bone diseases~~, which

comprises administering to a patient in need of such treatment a therapeutically effective amount of a compound according to Claim 4.

26. (Currently amended) A method for the treatment of central or peripheral neurodegenerative diseases; amyotrophic lateral sclerosis, multiple sclerosis; cardiovascular conditions; peripheral neuropathies; damage to the optic nerve and to the retina; spinal cord trauma and cranial trauma; atherosclerosis; stenoses; cicatrization; alopecia; cancers; tumours; metastases; leukaemias; chronic neuropathic and inflammatory pain; autoimmune diseases; **or** bone fractures~~; or bone diseases~~, which comprises administering to a patient in need of such treatment a therapeutically effective amount of a compound according to Claim 5.

27. (Currently amended) A method for the treatment of central or peripheral neurodegenerative diseases; amyotrophic lateral sclerosis, multiple sclerosis; cardiovascular conditions; peripheral neuropathies; damage to the optic nerve and to the retina; spinal cord trauma and cranial trauma; atherosclerosis; stenoses; cicatrization; alopecia; cancers; tumours; metastases; leukaemias; chronic neuropathic and inflammatory pain; autoimmune diseases; **or** bone fractures~~; or bone diseases~~, which comprises administering to a patient in need of such treatment a therapeutically effective amount of a compound according to Claim 6.

28. (Currently amended) A method for the treatment of central or peripheral neurodegenerative diseases; amyotrophic lateral sclerosis, multiple sclerosis; cardiovascular conditions; peripheral neuropathies; damage to the optic nerve and to the retina; spinal cord trauma and cranial trauma; atherosclerosis; stenoses; cicatrization; alopecia; cancers; tumours; metastases; leukaemias; chronic neuropathic and inflammatory pain; autoimmune diseases; **or** bone fractures~~; or bone diseases~~, which comprises administering to a patient in need of such treatment a therapeutically effective amount of a compound according to Claim 14.